Nutrition News

PUBLISHED BY NATIONAL DAIRY COUNCIL - CHICAGO

NUTRITION AND THE WHITE HOUSE CONFERENCE ON CHILDREN AND YOUTH

KATHARINE F. LENROOT
Chief, Children's Bureau
Social Security Administration
Federal Security Agency

At the Midcentury White House Conference meetings in December, dietitians, nutritionists, and other home economists joined with other delegates in re-examining the science of dietetics in the light of the Conference focus—how to give every child the chance for a healthy personality.

The result has been to further accentuate the part that home economics, in the broadest sense, can play in the development of the total person.

The Conference emphasis on healthy personality did not result in a neglect of questions of physical health and welfare. Rather, such tangibles as food and housing were recognized as tools basic to the building of stable, well-adjusted personalities, and many of the Conference materials reflect this consideration.

Pre-Conference, the relationship of nutrition to all-around development was pointed out in the report of the American Dietetic Association, which said:

"Good nutrition is one of the tangible safeguards against juvenile delinquency . . . Healthy bodies help to produce healthy minds even under adverse environmental circumstances."

Most of the pre-Conference state reports stressed the need for better health education; strengthening of the over-all health program through expansion of consultant services at the state level; and the need for more nutritionists.

The Conference Chart Book notes that present milk consumption supplies calcium at barely the recommended level. Among several Conference recommendations which touch on nutrition is the one which says that school lunches should be made available to all children, and that children unable to pay for their lunches should be furnished them free, without being differentiated from the children who pay; and the Chart Book points to school lunches as "another way to raise children's level of living."

But let me say again that it is hardly possible to overemphasize the extent to which such details were regarded as parts of a big, over-all picture. The feeling was that of experts in the many fields pooling their experience in a concerted approach to the individual's total situation. Almost invariably, consideration was directed to "the child's total needs," "the whole child," and not as an isolated unit of humanity but as a member of a family group.

Follow-up Programs

Among the first to draw their plans for follow-up work along these lines are home economists. A group of extension specialists in family life and parent education met for this purpose immediately after the Conference at the United States Department of Agriculture.

Another 130 home economists stayed in Washington for a two-day post-Conference meeting arranged jointly by the American Home Economics Association and the United States Office of Education. Leaders of this group:

1. Stressed the value of teamwork among the professions which touch the lives of children—the effectiveness of "the inter-disciplinary group that plans and supervises experiences."
2. Said that homemaking teaching must not lose sight of the student as a member of a family, and that child development-family relations courses should have a family focus, emphasizing the dynamics of interaction.
3. Reaffirmed that everything that helps parents feel secure within themselves adds to children's well-being; and urged that nutrition teaching aim to produce an appreciation of the need of children for happy meal hours, and in mothers a fundamental understanding of nutrition which will promote the sort of mealtime atmosphere that helps to integrate families.
4. Declared that homemaking programs and courses should concern themselves with realistic problems; and should be flexible enough to change with changing family living patterns.

Miss Lenroot

In carrying forward White House Conference follow-up, home economists will be working side by side with other thousands of our citizens. Many of the national organizations which participated in the Conference, and nearly all the states, now have follow-up programs planned or in being. By early 1951 a new national citizens' committee, dedicated to follow-up work, will be a going concern.

Finally, the Children's Bureau is actively engaged in follow-up, and will stand ready through the months and years to aid all groups in this endeavor.

FEBRUARY, 1951 • • VOLUME 14 • • NUMBER 3

Four Issues Annually — October — December — February — April

COPYRIGHT 1951, NATIONAL DAIRY COUNCIL, CHICAGO 6

Glances AT NUTRITION RESEARCH

Demonstrations of the human need for specific nutrients; determinations of human requirements for nutrients as affected by age, state of health, and environment; and evaluation of foods as sources of those nutrients are valuable aids to the practical nutritionist. Briefly presented here are recent reports of research which make such contribution.

A Human Growth Factor — Human infants have been shown to require an unknown growth factor, present in the non-fat portion of milk, which may be vitamin B_{12}. This observation was made in a study of eleven infants maintained on a completely synthetic diet for prolonged periods. The diet was adequate in all nutrients known to be required, containing a daily supply of members of the vitamin B complex corresponding in amounts to that contained in one quart of cow's milk. Folic acid was present, vitamin B_{12} was not. Growth was normal for varying lengths of time in the different subjects with ultimate cessation of growth after 40 to 180 days. There were no other symptoms of nutritive failure. When a normal infant diet was given, growth was resumed. The already demonstrated requirement of vitamin B_{12} for growth in other young animals suggests strongly that the missing factor is vitamin B_{12}.

—J. Nutrition 42 :31 (Sept.) 1950.

Dietary Fats and Liver Damage—New evidence is periodically reported on the important role of dietary fats in nutrition. Patients with liver injury have been severely limited in dietary fats because it was thought that fat might have an adverse effect on recovery of liver tissue. However, a study done with protein depleted rats after surgical removal of 70 percent of their livers, revealed beneficial effects on liver regeneration from high protein, high calorie diets containing fat. No unfavorable effects were observed.

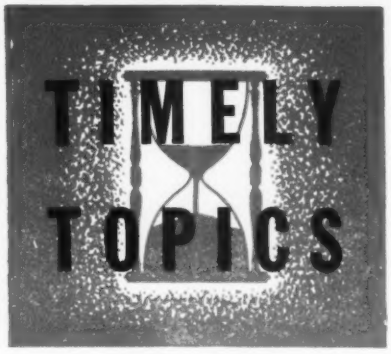
—Am. J. Physiology 163 :347 (Nov.) 1950.

Milk Contributes Essential Nutrients—Once again an evaluation of the food intake of a group of children demonstrates the important nutrient contribution of milk and its products. One hundred boys and girls living in an orphanage received 42 percent of their protein, 22 percent of their thiamine, 67 percent of their riboflavin, 81 percent of their calcium, and 54 percent of their phosphorus intakes from quantities of milk and cheese that furnished only 18 percent of their total calories. The investigators point to the importance of high intakes of milk in compensating for relatively lower supplies of some other types of food.

—J. Am. Diet. Assn. 26 :788 (Oct.) 1950.

Iron and Calcium Losses—In establishing the human requirement for iron and calcium, the amount of each which might be lost in perspiration has not generally been considered. Yet, studies indicate that body losses of these minerals in perspiration, are of sufficient magnitude to increase the requirement under average conditions of activity, temperature, and humidity. Four young women were found to lose 0.063, 0.08, 0.108, and 0.48 milligrams of iron per hour and 4.17, 6.80, 8.84, and 14.33 milligrams of calcium per hour under conditions designed to induce sweating. The Recommended Daily Dietary Allowances for these nutrients as outlined by the National Research Council are probably set high enough already to cover perspiration losses under average conditions in temperate climates.

—J. Nutrition 42 :285 (Oct.) 1950.



Miss Lenroot

The author of this issue's lead article has been chief of the Children's Bureau since 1934. She played an important role in development of the Social Security Act which opened way to development of maternal and child health services, services to crippled children, and child welfare services. Miss Lenroot takes prominent part in inter-American and international conferences on children and youth. She is secretary of the National Committee of the Midcentury White House Conference on Children and Youth.

"Food and People"

The United Nations Educational, Scientific, and Cultural Organization this year opened a "Food and People" campaign. The purpose is to encourage support of representatives to formulate needed programs, work out agreements to solve international trade problems, establish agricultural policies to cope with twin problems of abundance and scarcity.

Conference on Aging

At a recent National Conference on Aging, 800 authorities explored ways of making it possible for older people to use their capacities for productive work, creative living, and leadership. Nutrition is related to many factors; the kind and amount of food a person eats is influenced by finances, physical condition, whether he lives alone in a room or with relatives in a home. We have know-how to solve many health and medical problems and much could be accomplished if we applied all we know.

NUTRITIONAL ASPECTS OF A HUMAN GROWTH STUDY

Virginia A. Beal, M.P.H., Nutritionist, Child Research Council, Denver, Colorado

Each child grows in his unique pattern. Within the broad limits of human growth, there is much individual variation. This growth — physical, physiological, psychological — can be measured by several techniques. Some factors which influence that growth can be measured.

For over 20 years the Child Research Council has been studying growth and development of children, now numbering 170, mostly of Northern European ancestry from middle-class homes in Denver. These children are enrolled before birth; study starts prenatally with gathering of physical, social, psychological, and nutrition data. On the day of the child's birth he is examined by a pediatrician, an anthropometrist, a psychologically trained social worker, and blood biochemists.

During his first year he is brought to the Council about 20 times for one or more of the following: physical examination, measurements, x-rays, electrocardiogram, photographs and movies, basal metabolism, psychological tests, and blood analysis for levels of plasma proteins, red and white cells, hemoglobin, and certain vitamins (at present, vitamin A, carotene, riboflavin, niacin). Thereafter he is seen approximately 10 times each year for the same observations plus dental examinations. Home visits are made by the social worker, the psychologists, and the nutritionist.

Each examination supplies only part of the total growth pattern. By observing changes during growth of each child and environmental factors at play, and by trying to determine underlying mechanisms, the Council aims toward better understanding of the child and his adaptation to the world. While observing the pattern of each child's growth, we can determine differences between children at any age or maturity level.

Nutrition Studies

Nutrition studies which started in 1946 now include 55 of the younger children ranging in age from newborn to seven years old. Histories are taken in the home which permits observation of the home situation and facilitates measurement of specific serving sizes. A general picture of time and pattern of meals, food taken between meals, child's appetite and reaction to various foods, and family's handling of the child at meals precedes a detailed history which records frequency and amounts of specific foods consumed. Four 24-hour intakes are obtained, one during the interview and three on later days by the mother. No effort is made to change dietary intake; no advice is given. Histories are calculated from standard food value tables. Nutrition data are graphed for each child and compared with group percentile ranges.

Acceptance of Food

One of the most interesting observations is the change in appetite and food acceptance most children show in the preschool period. After a rapid rise during the first twelve to eighteen months, intake levels of nutrients reach a plateau and some, including calcium, even dip markedly. At about this time the rate of growth decelerates while the child's activity in feeding and other areas shows increasing independence.

The period of either stationary or decreased intake is maintained until three to four years of age, when the intake curve rises. The median calcium intake, which reaches a high point of about 1.1 grams at the end of the first year, decreases to just above 0.8 gram at two and a half years, then rises to 1 gram just after four years.

There is considerable variation among children in the timing of this decrease. Some show gradual lowering of intake (most markedly in milk and certain vegetables) and others show abrupt drop in appetite and enthusiasm for food. This change may first appear at any time between one and three years; the lower level may last a month or two or may persist for two years or more. None of the children in our nutrition series to date has gone through this period without altering appetite and food intake.

Significance of this decrease in food intake during the preschool period, its association with observations in psychological studies, and its effect on growth progress are areas for further study.

NUTRITION SERVICE FOR PHYSICALLY HANDICAPPED CHILDREN

By Agnes Schulz, Nutrition Consultant, State Department of Health, State of Oklahoma

Editor's Note: In describing experiences in nutrition service to cerebral palsy clinics, the author confines herself to the preschool age child whose progress in therapy does not yet permit the child to be taught to feed himself.

Nutrition service to itinerant cerebral palsy clinics of southeast Oklahoma began in 1948. Clinics are held quarterly in two areas by the Oklahoma Commission for Crippled Children. Patients are referred by field personnel of the Commission and local health departments. The physician who examines the children selects those to receive physical therapy and to return to future clinics. After the clinics a physical therapist offers parents and children instruction for two weeks in a local center. Patients live at home.

These physically handicapped children, who eat with difficulty, usually need even more food than the comparable well child. Extra movements they make in raising heads, moving arms and legs, and adjusting to new positions increase caloric needs. They need daily: good sources of animal protein as milk, eggs, lean meat, poultry, fish, cheese; good sources of vitamin C; at least one green or yellow vegetable among five or six servings of fruits and vegetables. At each meal they need whole-grain or enriched bread or cereal, with butter for vitamin A and calories. To meet energy needs, they need more of these or other foods the child likes.

The physician refers patients to the nutritionist. She talks with the mother about the foods the child likes, how they are prepared, feeding difficulties, if any. She makes suggestions to improve eating and records them for follow-up by the visiting public health nurse.

After the third clinic, the nutritionist stays in the community to talk with individual mothers while the therapist works with the child. Thus the mother, not having to hold the child, can relax. At the first of these meetings the mother is asked if she would like to keep a one-day record of what and how much

(Continued on Page Twelve)

—that in 1949, about 27 percent of the average income was spent on food?

●

—that about half of the cheese consumed in Cuba is of the cream type?

●

—that an electrical apparatus has been invented for pasteurizing milk in a split second "flash" of radio waves?

●

—that samples of partially digested feed from a calf's stomach show more B-complex vitamins than had originally been contained in his feed?

●

—that there are about 200 varieties of ice cream produced in the United States?

●

—that an apple has been developed whose flesh does not turn brown when exposed to air?

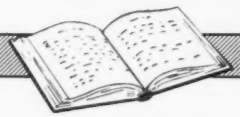
●

—that all commercial butter is graded for flavor, body and texture, color, salt, and packaging?

●

—that radiation can sterilize packaged food whether the container is made of glass, fiber, plastic, or even metal, if it is less than one inch thick?

THINGS YOU'LL LIKE TO READ



Food for Little People—Hazel Kepler and Elizabeth Hesser. Funk & Wagnalls Company, New York. 1950. $3.75.

Here is a book for parents and physicians. It presents psychologic as well as nutritional aspects of feeding preschool children. Authentic information, in remarkably readable style, includes what to feed your child, how to prepare and keep his food, how to get him to eat, and how to enjoy doing it. Special sections include suggestions for parties and sickroom diets. Amusing line drawings introduce each chapter.

Recipes for Quantity Service—PA-135. Bureau of Human Nutrition and Home Economics, Agricultural Research Administration, U.S. Department of Agriculture, Washington, D. C. Sept. 1950.

This is second in a series of leaflets of quantity recipes featuring widely available foods. These tested recipes yield 25, 50, 100 portions.

Nutrition—4th Edition. Margaret S. Chaney and Margaret Ahlborn. Houghton Mifflin Company, Boston, Massachusetts. 1949. $3.90.

This text was revised to incorporate latest findings. Bibliographies were made up to date. A new chapter summarizes current thinking on human nutrition in this country and internationally.

How to Turn Ideas into Pictures—H. E. Kleinschmidt, M.D., for National Publicity Council, New York. 1950. $1.00.

Dr. Kleinschmidt believes that visual communication is often better understood than the written or spoken word. To visualize your ideas takes no great manual skill. This booklet tells how ideas can be hatched and illustrated via visual shorthand to tell a story with an easy-going, nonchalant air. Stick drawings on each page help prove the saying which ends the booklet, "One picture is worth a thousand words."

NUTRITION SERVICE FOR PHYSICALLY HANDICAPPED CHILDREN

(Continued from Page Eleven)

her child eats. Those interested are shown a simple way to do this.

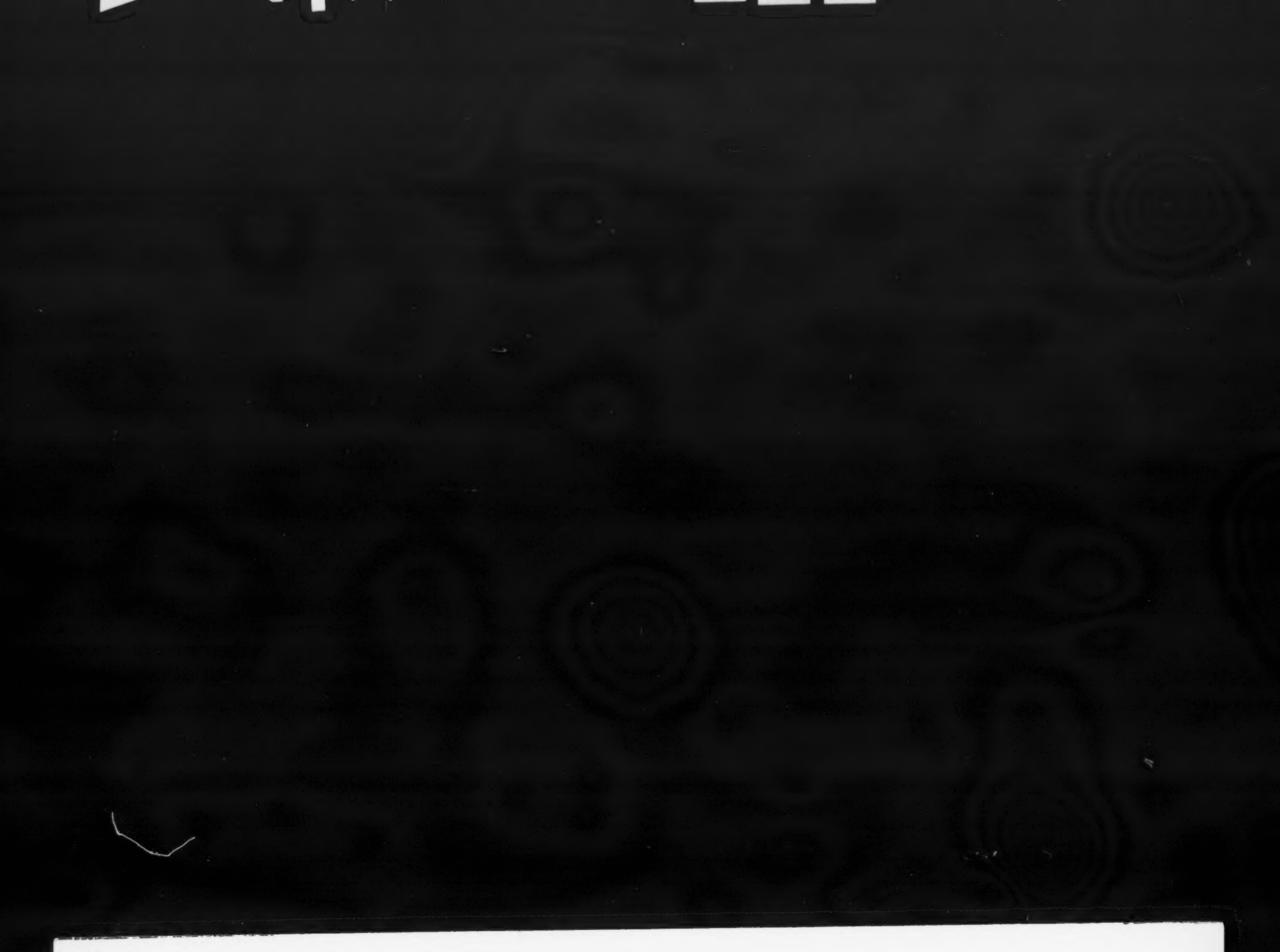
At a second meeting this diet history is discussed with the mother to see if omissions or amounts of foods need correction. After the meeting the nutritionist checks the diet by Recommended Daily Dietary Allowances. Findings of the diet history are discussed at a later meeting and further suggestions made.

Diet histories and recommendations are reviewed with the visiting public health nurse. This teamwork is important. The nurse uses the information in teaching in the home. She records progress made. Nutritionist and nurses try to support one another in a consistent program.

Home Consultation

The public health nurse sees the child eat at home and discovers the real problems. If the child needs to be held during feeding, she may suggest better positions. She can discover if the child is tense and how he reacts to his mother's feelings. If she feels insecure, the child does, too, and increases movements. These increase the problem of getting food into his mouth and of getting him to chew and swallow.

These mothers need reassurance; they need to hear that some of the things they do are right. One cause of tension is fear that the child will choke if she changes food consistency or offers new food. She needs to understand that a well child often spits out a new food. If the child presents difficulties, the mother should feed him when she can give him full attention; surroundings should not distract.

Mothers in rural areas without medical guidance sometimes meet their problem by feeding the child only soft foods: gravy, mashed potatoes, soft bread crumbs, plus milk. We plan with these mothers to add the protective foods usually started in a normal child's first year. Mother and child, as individuals, are considered in plans. The mother needs to succeed in her first effort, so we suggest only one food at a time. When mothers succeed, they are ready to go on.

Fortunately, our cerebral palsy children are great milk drinkers. Only one older girl has presented a milk-acceptance problem and her mother solved it by giving her a puppy to feed.